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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,117	11/06/2006	Alenka Vesel	5007653.001US1	2821
29737 7590 05/18/2009 SMITH MOORE LEATHERWOOD LLP P.O. BOX 21927 GREENSBORO, NC 27420				
EXAMINER NATALINI, JEFF WILLIAM				
ART UNIT		PAPER NUMBER		
2831				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/590,117

Applicant(s)

VESEL ET AL.

Examiner

JEFF NATALINI

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date ____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

FINAL ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edelmann et al. (US Pub 20060012373) in view of Scheid et al. (4409482).

In regard to claims 1, 3, and 4, Edelmann et al. discloses:

a method/device for measuring ultrahigh vacuum comprising an ultrahigh-vacuum cold cathode pressure gauge (abstract), in that the voltage on the anode of the cold cathode gauge varies with pressure of the ion current flow (paragraph 15 page 2 and also paragraph 22 page 3), wherein the voltage controlled source is in communication with the anode of the pressure gauge (figure 2, anode A of pressure cell MR is connected to source UA) preliminary scans the whole range, and subsequently sets the source to a voltage (paragraph 22 page 3, an alternating voltage would produce a voltage in a range of voltages, and would be maintained at times by the alternating current- paragraph 22) in a relatively short time ("short time" is relative and any time would broadly read on it).

Edelmann et al. lacks specifically wherein the ion current flow is maintained at its maximum value at all times during the measurement.

Scheid et al. discloses wherein in a vacuum system a maximum current is generated at the ion collector and is maintained constant for a given length of time (col 1 line 18-34).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Edelmann et al. to incorporate keeping the ion flow at its maximum value during the time period for measuring the vacuum pressure as taught by Scheid et al. in order to maintain a correct path of motion of the ions through the measurement for accurate results (col 1 line 20-22).

3. Claims 2 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edelmann et al. (US Pub 20060012373) and Scheid et al. (4409482), as applied to claim 3 and 4 above, and further in view of Peacock (4967157) [note claim 2 is rejected by the three references and not as applied any of the claims above since it is an independent claim] .

In regard to claims 2 and 5-8, Edelmann et al. discloses:

a method/device for measuring ultrahigh vacuum by means of an ultrahigh-vacuum cold cathode pressure gauge (abstract), in that the voltage on the anode of the pressure cold cathode gauge with pressure of the ion current flow (paragraph 15 page 2 and also paragraph 22 page 3), wherein the voltage controlled source is connected to the pressure gauge (figure 2, pressure cell MR is connected to source UA) preliminary scans the whole range, and subsequently sets the source to a voltage (paragraph 22

page 3, an alternating voltage would produce a voltage in a range of voltages, and would be maintained a times by the alternating current)

Edelmann et al. lacks specifically

(claims 2 and 5) wherein the ion current flow is maintained at its maximum value at all times during the measurement and wherein based on a calibration of the gauge will set the value of the source to one stored as optimal (highest current) and

(claims 6, 7, and 8) wherein the pressure gauge is a magnetron pressure gauge, Peacock discloses

[claims 2 and 5] wherein the tube voltage data in a cold cathode discharge vacuum gauge has a calibration voltage and current values with respect to the pressure in the gauge (col 2 line 33-36 and also see col 4 line 54-58) and includes a microprocessor (figure 5 element 28) which can store and show (figure 5, display 32 directly connected to microprocessor 28) the displayed values shown in figures 2 and 3 and [claims 6-8] wherein the cell can be a magnetron pressure cell/gauge or Penning pressure gauge cell/gauge (col 3 line 46-49).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Edelmann et al. to include calibrating the Penning or magnetron pressure gauge/cell used for testing as taught by Peacock in order to have and understand the variance between voltage/current and pressure.

Scheid et al. discloses wherein in a vacuum system a maximum current is generated at the ion collector and is maintained constant for a given length of time (col 1 line 18-34).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Edelmann et al. to incorporate keeping the ion flow at its maximum value during the time period for measuring the vacuum pressure as taught by Scheid et al. in order to maintain a correct path of motion of the ions through the measurement for accurate results (col 1 line 20-22).

4. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edelmann et al. (US Pub 20060012373) and Scheid et al. (4409482), as applied to claims 1 and 4 above, and further in view of Hollman (US Publication 20030042921).

Edelmann et al. as modified lacks specifically stating wherein the voltage range is between 1kV and 12kV.

Hollman discloses an analytical probe station that conveys signals inside a vacuum chamber (paragraph 6 page 1), wherein a range of voltages is controlled within a range of 1.5kV to 20kV (page 29 paragraph 240).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Edelmann et al. as modified to include a range of voltages as disclosed by Hollman in order to prevent damages to the vacuum and any devices located around/inside the vacuum (page 29 paragraph 240).

Response to Arguments

5. Applicant's arguments filed 2/25/09 have been fully considered but they are not persuasive. In reading through the arguments, it seems the applicant is making a more

specific interpretation of the claim language than required by the examiner. In examining an application, the claims must be examined in the broadest reasonable interpretation. A response to the arguments in the order argued follows:

Applicant argues that the voltage in Edelmann et al. is not varied, stating that the voltage is not varied once either of the sources has been engaged. Even if this were true, changing the sources based on the pressure meets the limitations of the broad claim language of "varying a voltage on an anode of the cold cathode pressure gauge" as changing the source will change the voltage applied. Further applicant argues that Edelmann does not "scan a whole voltage range in a relatively short time", this broad claim language, reads on a sinusoidal or alternating voltage (paragraph 15) as the sinusoidal voltage will go through a range of voltage values (even the rectangular will go through at least two values, broadly a range). Since the claims do not specify the values of the range or how many values are in the range, this broadly reads on the claim language.

Further applicant argues that Edelmann et al. is unable to measure the dependence of the ion current upon voltage or find the maximum, these limitations are not found in the claim language. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant also continues to argue that based on the definition of alternating voltage a "whole voltage range" is not scanned. But broadly, as described in the paragraph above, an alternating voltage source will scan through at least two (therefore a range) of values. It seems

applicant believes that the claim language is specific to "scanning the whole voltage range to find a maximum value", which is not in the claim language.

Applicant argues that Edelmann et al. lacks "maintaining substantially an ion current flow at a maximum value", and this is admitted in the office action as seen on page 4 of the office action of 8/28/08. This feature is lacking from Edelmann et al., and is the reason for bringing in the teaching of Scheid et al.

Applicant also argues that Scheid et al. lacks varying the source voltage to determine where the ion current is maintained substantially at its maximum value at all times (argument page 7). The claim language does not state 'a determination is made', only that a "ion current is maintained substantially constant at it's maximum value at all times" which Scheid et al. discloses in (col 1 line 18-34) for a given amount of time, and as described in the rejection it would be obvious to have it at a maximum current for all times in order to maintain a correct path of motion of the ions. Also, Scheid et al. discloses in the abstract, that the stabilization of ions is based on a voltage, so this relates the voltage and current in the system of Scheid et al.

Because claims 1, 3, and 4, are properly combined as described above, claims 2 and 5-10 remain rejected.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFF NATALINI whose telephone number is (571)272-2266. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Gutierrez/
Supervisory Patent Examiner, Art Unit 2831

/Jeff Natalini/
Examiner, Art Unit 2831